PUGET SOUND CLEAN AIR AGENCY
110 Union Street, Suite 500
Seattle, Washington 98101-2038
800-552-3565 206-343-8800
FAX 206-343-7522 www.pscleanair.org

Asbestos Survey Guidance

Introduction

This document was developed to provide guidance on scope, structure, and content of an "Asbestos Survey." It is intended for use by local area providers of asbestos surveys, abatement contractors, other regulatory agencies, and building owners. There are two parts to this guidance: 1) "Guidelines for an Asbestos Survey," and 2) "Asbestos Survey Field Checklist." The information contained in these two parts identifies what Puget Sound Clean Air Agency believes is necessary in an Asbestos Survey.

Agency Regulation III, Article 4.02(a), requires an "Asbestos Survey" before the renovation or demolition of a building. Puget Sound Clean Air Agency defines an "Asbestos Survey" as a "written report describing an inspection using the procedures contained in EPA Regulations (40 CFR 763.86)..." However, this EPA regulation addresses only sampling protocol with an emphasis on numbers of samples to be collected by an "Accredited Inspector" under different survey conditions, and a requirement for "random" sample collection.

This guidance is also intended to clarify when an "Asbestos Building Inspector" is required for a survey, destructive investigations, and minimal reporting requirements. The Checklist is a field document intended to assist AHERA building inspectors on the construction considerations of the building being surveyed, inspection scope, and sampling protocol.

Guidelines

When an Asbestos Building Inspector is Required

Asbestos Surveys for renovations and demolitions must be performed by an AHERA Building Inspector as defined under 40 CFR 763 except for surveys associated with the *renovation* of an owner-occupied, single-family residence. For the *renovation* of such residences, homeowners may perform their own asbestos surveys.

However, if an owner-occupied, single-family residence is to be *demolished*, an AHERA Building Inspector must be employed for the asbestos survey.

Purpose of Survey

Asbestos surveys are very much project specific. It is important that an asbestos survey be used only for its intended purpose. For example, a limited survey conducted as part of a pre-purchase inspection is not likely to meet the requirements of 40 CFR 763 and thus would not suffice as an asbestos inspection for renovation or demolition. The purpose and limitations of any asbestos survey should be clearly identified.

Field Procedures

- Determine what materials were required for use under the Uniform Building Code in effect at the time of construction and past renovations of the structure, if available.

Field Procedures continued

- Review existing data including design drawings, as-built drawings, project specifications, and any existing survey and/or laboratory information, if available.
- Use equipment that will allow visual examination of all accessible spaces.
- Confirm with the owner or owner's representative the exact area under investigation, exact nature of demolition/renovation and identify all materials that will be disturbed or accessed.
- Determine whether the building will be totally or partially renovated and/or demolished.
- Determine and investigate each building's structural, mechanical, and roofing systems that are to be disturbed.
- Perform a comprehensive investigation of areas to identify suspect materials to be sampled and/or assumed to contain asbestos.
- Create a sampling plan based on suspect materials present and requirements of 40 CFR 763.86.
- Collect bulk samples of all suspect materials that will be disturbed and not assumed to be asbestos and submit them to a certified laboratory for analysis. (A "Sample Asbestos-Containing Material List" is included as a last page to the Guideline. Note that this is not a comprehensive list of all potential Asbestos Containing Materials.)
- Document where asbestos materials exist and record their exact location, condition and quantity. "Condition" shall include a physical assessment to determine whether or not each asbestos material is "friable" as defined in this Agency's Regulation III, Section 4.01.
- Also document all sampled materials found to be negative for asbestos, including original location, condition, and quantity.

Destructive Investigation

Many asbestos containing materials are located in concealed areas such as wall cavities, below ground level, and other hidden spaces. The Agency expects destructive investigation, as necessary, to gain access to these hidden spaces and to inspect them for suspect materials. The following guidelines constitute reasonable criteria for locating concealed materials:

- Identify the different building systems which may involve concealed asbestos materials such as the heating/cooling system, domestic water lines, roof drainage lines, miscellaneous piping lines, underlying roofing, etc.
- Open hidden areas and inspect each system in at least three (3) locations for each area of construction.
- Focus the inspection on likely areas for suspect materials (i.e. where insulated pipe enters walls or ceilings, behind heating units, etc.).
- Examine additional areas if results of inspection are inconsistent.
- Clearly list all concealed areas which have not been inspected, and explain why they were not inspected. Reasons why may include: (1) records showing recent access to such spaces and sample results, (2) safety hazards, and (3) restrictions imposed by the property owner.

- For those asbestos surveys that include inaccessible concealed spaces, a qualified person should be available during the project to address the potential of unidentified *suspect* materials becoming disturbed once work begins.
- AHERA Building Inspectors may discuss with the property owner the possible need to disconnect electrical power or other utilities during the destructive phase of the investigation. It may also be desirable for the property to be unoccupied.

Survey Report Format and Content

The survey report should list the results of an asbestos survey in a manner to promote ease of comprehension. The survey report should also contain an introductory summary that briefly explains what will be found in the report. Documentation such as field data sheets and photographs should appear in appendices of the report.

Background Information & Scope of Work:

- Date(s) of field inspection
- Date of report submittal
- Building address
- Building owner including address and contact person
- Description of area surveyed including any exclusions or limitations (be specific).
- Description of building status after survey, if known (Will the building be totally or partially renovated and/or demolished?)
- Name of report writer(s) and reviewer(s) including AHERA accreditation information

Building Description:

- Building name, if any
- Type of building i.e. commercial, warehouse, retail, residential, etc.
- Special features of building
- Type of business
- Approximate age of structures and dates of past renovations
- Description of building systems such as structural system, mechanical system, roofing system, non-structural systems (not inherent to building), etc.

Building Inspector/Firm Affiliation/ Laboratory Information:

- Name(s) of Building Inspector(s) including certification number, inspectors signature and expiration date
- Inspector firm information including name, address, and phone number
- Laboratory name and accreditation
- Special instructions regarding type of analysis requested such as PLM, point counting, TEM

Survey Methodology:

- Describe the inspection procedure being used, including the scope of the survey. The inspection must be in accordance with the sampling protocol in 40 CFR 763.86, as required by Puget Sound Clean Air Agency's Regulation III, Article 4.
- Inventory the locations of homogeneous areas where samples are to be collected
- Describe the sampling methods employed
- If hidden or inaccessible areas are to be disturbed or are likely to be disturbed, provide a detailed description of the procedure used to find hidden suspect materials. (For example, if asbestos pipe insulation is suspected in a wall cavity, describe by location, where wall was opened for examination.) The Agency recommends that each building and non-structural (not inherent to building) system suspected of having asbestos materials be breached and sampled at a minimum of three locations.

Asbestos Identification Process:

- Prepare a sample and suspect asbestos material location plan
- List all materials sampled and tested, including test results and date(s) collected
- List all suspect materials assumed to contain asbestos; be specific in terms of quantity and location of materials
- List whether homogeneous areas identified are surfacing material, thermal system installation, or miscellaneous material and indicate amount of suspect materials sampled; be specific
- Describe exact location where each bulk sample is collected and assessment made of friability including reasons for assessment.

Notice to Demolition/Renovation Contractors:

- Highlight in the inspection report any concealed areas that were not surveyed and that may contain undiscovered asbestos containing materials.
- Clearly list all hidden areas and list all potential asbestos containing materials that may be found.

Procedure for Communicating Survey Findings to Affected Parties

The AHERA Building Inspector should assist the property owner in communicating both verbally and in writing the survey findings (copy of survey report) to persons who may come in contact with any identified or suspect asbestos containing materials. Such persons may include contractors, subcontractors, building occupants/guests/visitors, custodial and maintenance staffs, occupants of neighboring buildings, etc.

Sample Asbestos-Containing Material List

- Window Glazing
- Stucco
- Cement Pipes
- Cement Board/Transit
- Duct Tape/Paper
- Furnace Insulation
- Vinyl Sheet Flooring/Mastic
- Vinyl Floor Tile/Mastic
- Poured Flooring
- Pipe Insulation/Fittings
- Plaster/ wall joints
- Textured Paints/Coatings
- Ceiling Tiles/Panels/Mastic
- Spray-applied Insulation
- Blown-in Insulation
- Fireproofing
- Sink Insulation
- Packing Materials
- High Temperature Gaskets
- Lab Hoods/Table Tops
- Fire Blankets
- Fire Curtains/Hose
- Sink Insulation
- Elevator Brake Shoes
- Asphalt Flooring
- Paper on backside of Fiberglass Insulation
- Erkot roofing material
- Laboratory fume hoods
- Paper Fire Box in Walls
- Fire Doors
- HVAC Duct Insulation
- Boiler/Tank Insulation
- Breaching Insulation
- Ductwork Flexible Connections
- Construction Mastics
- Acoustical Ceiling Texture ("Popcorn")
- Electrical Panel Partitions
- Electrical Cloth
- Electrical Wiring Insulation
- Chalkboards
- Roofing Shingles
- Built-up Roofing
- Base Flashing
- Rolled Roofing
- Caulking/Putties
- Incandescent Light Fixture Backing
- Joint Compound/Wallboard
- Brick mortar
- Vinyl Wall Coverings
- Vapor Barrier
- Cement Roofing Shingles
- Gray roofing paint
- Nicolet (white) roofing paper
- Sub flooring slip sheet
- Mudded pipe elbow insulation

Note: This list does not include every product that may contain asbestos. It is intended as a general guide to show which types of materials may contain asbestos.